

What is claimed is:

[c1] A method for manufacturing an EUV lithography element, comprising:

sagging a plate of a glass material to produce a blank; and

polishing a top face of the blank to produce a finished lithography element.

[c2] The method of claim 1, wherein the glass material is made by flame hydrolysis.

[c3] The method of claim 1, wherein the glass material comprises an ultra low expansion glass material.

[c4] The method of claim 3, wherein the ultra low expansion glass material has a coefficient of thermal expansion of no more than about 30 parts per billion per degree Celsius in a temperature range of 5 to 35 degrees Celsius.

[c5] A method for manufacturing a EUV lithography element, comprising:

grinding a top face of a piece of a glass material;

sagging a plate of the glass material over the top face of the piece to produce a blank; and

polishing a top face of the blank to produce a finished lithography element.

[c6] The method of claim 5, wherein the glass material is made by flame hydrolysis.

[c7] The method of claim 5, wherein the glass material comprises an ultra low expansion glass material.

[c8] The method of claim 5, wherein the ultra low expansion glass material has a coefficient of thermal expansion of no more than about 30 parts per billion per degree Celcius in a temperature range of 5 to 35 degrees Celcius.

[c9] A method for manufacturing a mirror, comprising:

sagging a plate of a glass material to produce a mirror blank; and

polishing a top face of the mirror blank to produce a finished mirror.

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- [c10]** The method of claim 9, wherein the glass material is made by flame hydrolysis.
- [c11]** The method of claim 9, wherein the glass material comprises an ultra low expansion glass material.
- [c12]** The method of claim 11, wherein the ultra low expansion glass material has a coefficient of thermal expansion of no more than about 30 parts per billion per degree Celsius in a temperature range of 5 to 35 degrees Celsius.
- [c13]** A method for manufacturing a mirror, comprising:
- grinding a top face of a piece of a glass material;
 - sagging a plate of the glass material over the top face of the piece to produce a mirror blank; and
 - polishing a top face of the mirror blank to produce a finished mirror.
- [c14]** The method of claim 13, wherein the glass material is made by flame hydrolysis.
- [c15]** The method of claim 13, wherein the glass material comprises an ultra low expansion glass material.
- [c16]** The method of claim 13, wherein the ultra low expansion glass material has a coefficient of thermal expansion of no more than about 30 parts per billion per degree Celcius in a temperature range of 5 to 35 degrees Celcius.